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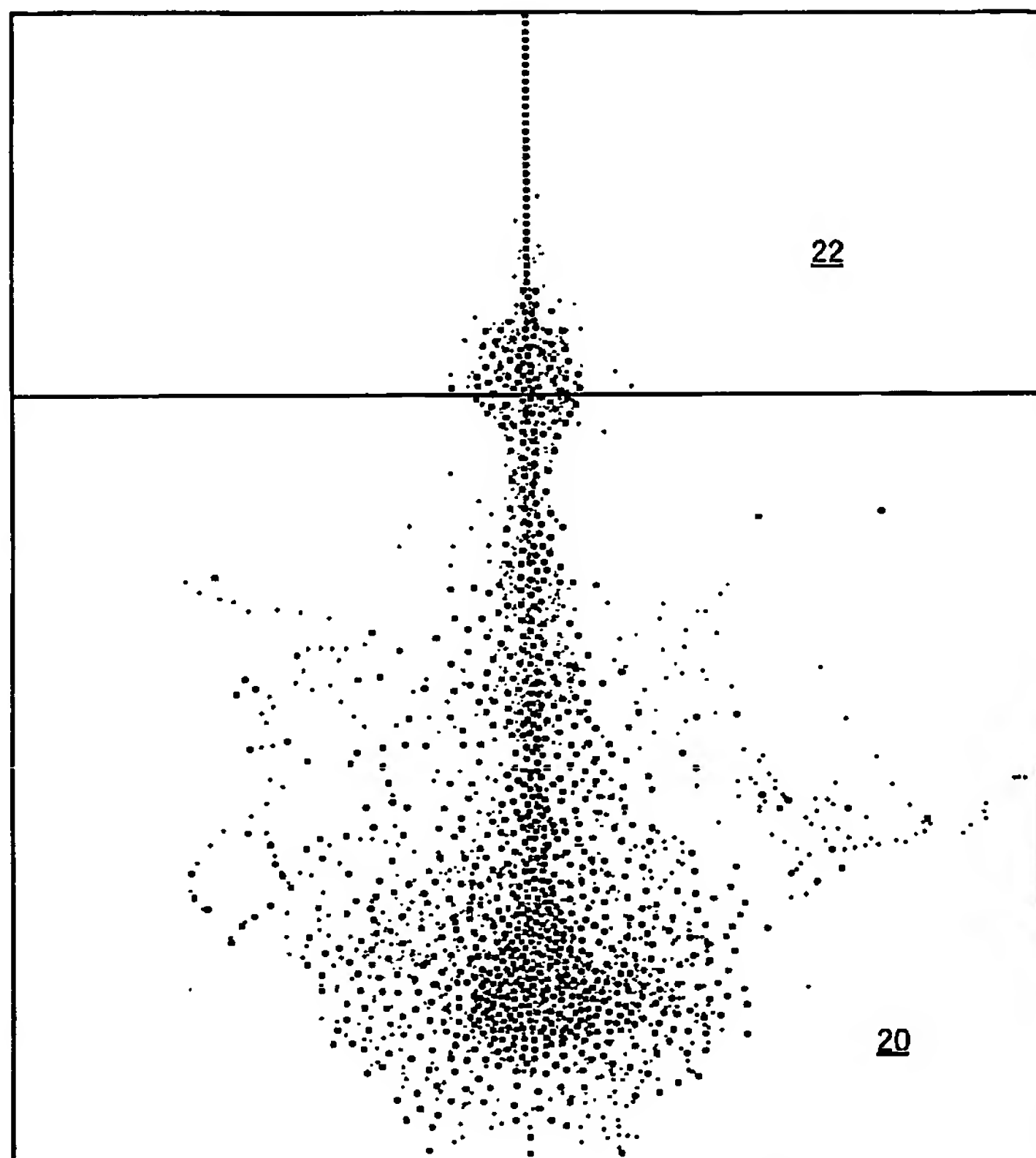
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(54) Title: FLEXIBLE ELECTRONICS USING ION IMPLANTATION TO ADHERE POLYMER SUBSTRATE TO SINGLE  
CRYSTAL SILICON SUBSTRATE



(57) Abstract: An electronic apparatus  
uses a single crystalline silicon substrate  
disposed adjacent to a flexible substrate. The  
electronic apparatus may be a flexible flat  
panel display, or a flexible printed circuit  
board. The flexible substrate can be made  
from polymer, plastic, paper, flexible glass,  
and stainless steel. The flexible substrate  
is bonded to the single crystalline substrate  
using an ion implantation process. The ion  
implantation process involves the use of a  
noble gas such as hydrogen, helium, xenon,  
and krypton. A plurality of semiconductor  
devices are formed on the single crystalline  
silicon substrate. The semiconductor devices  
may be thin film transistors for the flat panel  
display, or active and passive components for  
the electronic device.

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